

Notice of Allowability

Application No.

10/747,965

Examiner

Yuriy Semenenko

Applicant(s)

RADHAKRISHNAN ET AL.

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/27/2007 and Telephonic Interview at 04/06/2007.
2. ☒ The allowed claim(s) is/are 1-5,7-9,11-13 and 16-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Allowable Subject Matter

Response to Amendment

1. Amendments filed on 02/07/2007 and 03/27/2007 have been entered.

In response to the Final Office Action dated 12/05/ 2006 and Advisory Action dated 03/07/2007 Applicants have amended claims 8, 11, 16 and 17. Claims 6, 10 and 14-15 have been cancelled.

Claims 1-5, 7-9, 11-13 and 16-20 are now pending in the application.

Response to Arguments

2. Applicant's arguments discussed during Telephonic Interview dated 04/06/2007 have been considered and they are found persuasive.

Allowable Subject Matter

3. Claims 1-5, 7-9, 11-13 and 16-20 are allowed.
- 3.1. The following is a statement of reasons for the indication of allowable subject matter claims 1 and 2, 4, 5: The combination of a plurality of first conductive vias and a plurality of second conductive vias and openings formed in the capacitor structure to enable pins from an integrated circuit package to pass through, in combination with

other claimed limitations in independent claim 1 are not disclosed or suggested by the prior art.

Claims 2 and 4-5 directly or indirectly depend upon claim 1.

3.2. The following is a statement of reasons for the indication of allowable subject matter claim 3. The limitations "the openings are arranged to coincide with at least four pins from the IC package that are located directly underneath a semiconductor die" in combination with other claimed limitations in independent claim 3 is not disclosed or suggested by the prior art.

3.3. The following is a statement of reasons for the indication of allowable subject matter claim 7. The limitations "the openings are arranged to coincide with at least four pins from the IC package that are located directly underneath the integrated circuit" in combination with other claimed limitations in independent claim 7 is not disclosed or suggested by the prior art.

3.4. The following is a statement of reasons for the indication of allowable subject matter claims 8 and 9: The limitations "a plurality of first conductive layers coupled to a first node in the integrated circuit and a plurality of second conductive layers interleaved with the first conductive layers" in combination with other claimed limitations in independent claim 8 are not disclosed or suggested by the prior art.

Claim 9 depends upon claim 8.

3.5. The following is a statement of reasons for the indication of allowable subject matter claims 11 and 12, 13: The limitations "an array capacitor with a plurality of openings and a socket to receive the pins from the IC package" in combination with

other claimed limitations in independent claim 11 are not disclosed or suggested by the prior art.

Claims 12 and 13 directly depend upon claim 11.

3.6. The following is a statement of reasons for the indication of allowable subject matter claim 16. The limitations "an array capacitor with a plurality of openings and electrically connecting the IC package to a socket " in combination with other claimed limitations in independent claim 16 is not disclosed or suggested by the prior art.

3.7. The following is a statement of reasons for the indication of allowable subject matter claims 17 and 18: The limitations in the combination "of a plurality of first conductive layers and a plurality of second conductive layers interleaved with the first conductive layers, in further combination with the other limitations of broader Claim 17. " in combination with other claimed limitations in independent claim 17 are not disclosed or suggested by the prior art.

Claim 18 depends upon claim 17.

3.8. The following is a statement of reasons for the indication of allowable subject matter claim 19. The limitations "a capacitor having a plurality of first conductive layers and a plurality of second conductive layers interlinked with the first conductive layers " in combination with other claimed limitations in independent claim 19 is not disclosed or suggested by the prior art.

3.9. The following is a statement of reasons for the indication of allowable subject matter claim 20. The limitations "a capacitor having a plurality of first conductive layers and a plurality of second conductive layers interlinked with the first conductive layers


" in combination with other claimed limitations in independent claim 20 is not disclosed or suggested by the prior art.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuriy Semenenko whose telephone number is (571) 272-6106. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on (571)- 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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